# AC

## FW

Conflicting moral side-constraints would paralyze state action, so states must use util to weigh deontological violations.

And, respect for human worth would justify util. **Cummiskey 90**[[1]](#footnote-1)

We must not obscure the issue by characterizing this type of case as the sacrifice of individuals for some abstract “social entity.” It is not a question of some persons having to bear the cost for some elusive “overall social good.” Instead, the question is whether some persons must bear the inescapable cost for the sake of other persons. Robert Nozick, for example, argues that “to use a person in this way does not sufficiently respect and take account of the fact that he is a separate person, that his is the only life he has.” But why is this not equally true of all those whom we do not save through our failure to act? **By emphasizing solely the one who must bear the cost if we act, we fail to** sufficiently **respect** and take account of **the many other** separate **persons**, each with only one life, **who will bear the cost of our inaction**. In such a situation, what would a conscientious Kantian agent, an agent motivated by the unconditional value of rational beings, choose? A morally good agent recognizes that the basis of all particular duties is the principle that “rational nature exists as an end in itself”. Rational nature as such is the supreme objective end of all conduct. If one truly believes that all rational beings have an equal value, then the rational solution to such a dilemma involves maximally promoting the lives and liberties of as many rational beings as possible. In order to avoid this conclusion, the non-consequentialist Kantian needs to justify agent-centered constraints. As we saw in chapter 1, however, even most Kantian deontologists recognize that agent-centered constraints require a non- value-based rationale. But we have seen that Kant’s normative theory is based on an unconditionally valuable end. How can a concern for the value of rational beings lead to a refusal to sacrifice rational beings even when this would prevent other more extensive losses of rational beings? If the moral law is based on the value of rational beings and their ends, then what is the rationale for prohibiting a moral agent from maximally promoting these two tiers of value? If I sacrifice some for the sake of others, I do not use them arbitrarily, and I do not deny the unconditional value of rational beings. **Persons** may **have “dignity**, that is, an unconditional and incomparable worth” **that transcends any market value, but persons also have** a fundamental **equality that dictates that some must** sometimes **give way for the sake of others.** The concept of the end-in-itself does not support the view that we may never force another to bear some cost in order to benefit others.

Thus the standard is **maximizing happiness**.

**Advocacy**: On balance, less industrialized economies should accept the Precautionary Principle when environmental protection and resource extraction conflict. Proving one instance false is not competitive with my advocacy.

## Advantage 1 is Food Crises

Prioritizing resource extraction makes collapse of civilization and food crises inevitable. Sustainable development solves.

**Luntz 3-19** writes[[2]](#footnote-2)

**Our** industrial **civilization faces the same threats of collapse that** earlier versions such as **the Mayans experienced**, a study to be published in Ecological Economics has warned. The idea is far from new, but the authors have put new rigor to the study of how so many previous societies collapsed, and why ours could follow. Lead author Mr Safa Motesharrei is no wild-eyed conspiracy theorist. Motesharrei is a graduate student in mathematics at the National Socio-Environmental Synthesis Center, a National Science Foundation-supported institution, and the research was done with funding from NASA's Goddard Space Flight Center. "The fall of the Roman Empire, and the equally (if not more) advanced Han, Mauryan, and Gupta Empires, as well as so many advanced Mesopotamian Empires, are all testimony to the fact that advanced, sophisticated, complex, and creative civilizations can be both fragile and impermanent," the forthcoming paper states Two key social features are identified that contributed to the collapse of every civilization studied: “The stretching of resources due to the strain placed on the ecological carrying capacity," and "The economic stratification of society into Elites [rich] and Masses (or "Commoners") [poor]". If these look familiar, so do the factors that make up the resource side of the equation, with climatic change, and scarcity of water and energy key among them, although for others climate variation was a matter of bad luck, rather than their own actions. The model **Motesharrei** used, Human And Nature Dynamics (HANDY), **explores the relationship between population and resources**, drawing heavily on predator-prey models used by ecologists. Four key factors were included in the model: Elites, Commoners, nature and wealth. Equations of how these interact were created with varying inputs. The outcomes were not pretty. The timing and shape of collapses varied, but the **societies that most closely resembled our own doomed themselves, through overuse of resources** exacerbated by economic stratification. In one scenario many commoners do make it into the elite population at year 750, but the “scarcity of workers” caused a collapse by year 1000. In another so many of the Earth's resources are consumed that society, and the ecology of the planet, are doomed by the year 500. “It is important to note that in both of these scenarios, the Elites — due to their wealth — do not suffer the detrimental effects of the environmental collapse until much later than the Commoners,” the paper notes. If those year numbers seem comfortingly far off, be aware that the year zero in these models is well behind us. Nevertheless, contrary to much of the reporting, the model does not provide a useful timeline for when we can expect to see the world we live in turn into something that resembles a post-apocalyptic nightmare, although **studies of** the **convergence of climate and resource challenges suggest we may witness drastic food crises within a little over a decade**. In every economic bubble people looking back to past crashes are told “this time it is different”. Certainly some things have changed for modern civilization compared to the others Motesharrei has looked at. Technological developments that provide access to greater resources is the most frequently mentioned difference. Motesharrei responds, “**Tech**nological change **can raise** the **efficiency of resource use, but** it **also** tends to raise both **per capita** resource **consumption and the scale of** resource **extraction**, so that, absent policy effects, the increases in consumption often compensate for the increased efficiency of resource use.” One advantage we do have, however, is much greater knowledge of what has gone wrong in the past, and therefore the capacity to build models like HANDY. In a presentation of an earlier draft of this work in 2012 Motesharrei noted, “Simple models provide a great intuition and can teach us invaluable points. It is crucial to have a measure that can give us an early warning of collapse. Carrying Capacity tells us when overshoot happens, and this can be defined by noticing the decline in wealth.” Some coverage of the announcement has described disaster as inevitable, but that is not the paper's conclusion at all. “**Collapse can be avoided** and population can reach equilibrium **if** the **per capita** rate of **depletion** of nature **is reduced to a sustainable level**, and if resources are distributed in a reasonably equitable fashion,” it argues. Although the study has reportedly passed peer review it is yet to be published. It received global attention after a pre-release version was provided to The Guardian.

Food crises independently escalate to World War 3. **Calvin 98** writes[[3]](#footnote-3)

The population-crash scenario is surely the most appalling. **Plummeting crop yields would cause** some **powerful countries to try to take over** their **neighbors or distant lands** -- if only because **their armies,** unpaid and **lacking food, would go marauding**, both at home and across the borders. The **better-organized countries would attempt to use their armies, before they fell apart entirely, to take over countries with significant remaining resources,** driving out or starving their inhabitants if not using modern weapons to accomplish the same end: **eliminating competitors for the remaining food. This** would be a worldwide problem -- and **could lead to a Third World War** -- but Europe's vulnerability is particularly easy to analyze. The last abrupt cooling, the Younger Dryas, drastically altered Europe's climate as far east as Ukraine. Present-day Europe has more than 650 million people. It has excellent soils, and largely grows its own food. It could no longer do so if it lost the extra warming from the North Atlantic.

Sustainable development independently solves extinction. **Barry 13** writes[[4]](#footnote-4)

Science needs to do a better job of considering worst-case scenarios regarding continental- and global-scale ecological collapse. The loss of biodiversity, ecosystems, and landscape connectivity reviewed here shows clearly that ecological collapse is occurring at spatially extensive scales. **The collapse of the biosphere and** complex life, or eventually even **all life, is a possibility that needs to be** better understood and **mitigated** against. A tentative case has been presented here that terrestrial **ecosystem loss is at** or near **a** planetary **boundary**. It is suggested that a 66% of Earth's land mass must be maintained in terrestrial ecosystems, to maintain critical connectivity necessary for ecosystem services across scales to continue, including the biosphere. Yet various indicators show that around 50% of Earth's terrestrial ecosystems have been lost and their services usurped by humans. Humanity may have already destroyed more terrestrial ecosystems than the biosphere can bear. **There exists a major need for** further research into how much land must be maintained in a natural and agroecological state to meet landscape and bioregional **sustainable development goals** while maintaining an operable biosphere. It is proposed that a critical element in determining the threshold where terrestrial ecosystem loss becomes problematic is where landscape connectivity of intact terrestrial ecosystems erodes to the point where habitat patches exist only in a human context. Based upon an understanding of how landscapes percolate across scale, it is recommended that 66% of Earth's surface be maintained as ecosystems; 44% as natural intact ecosystems (2/3 of 2/3) and 22% as agroecological buffer zones. Thus nearly half of Earth must remain as large, connected, intact, and naturally evolving ecosystems, including old-growth forests, to provide the context and top-down ecological regulation of both human agroecological, and reduced impact and appropriately scaled industrial activities. Given the stakes, it is proper for political ecologists and other Earth scientists to willingly speak bluntly if we are to have any chance of averting global ecosystem collapse. A case has been presented that Earth is already well beyond carrying capacity in terms of amount of natural ecosystem habitat that can be lost before the continued existence of healthy regional ecosystems and the global biosphere itself may not be possible. Cautious and justifiably conservative science must still be able to rise to the occasion of global ecological emergencies that may threaten our very survival as a species and planet. Those knowledgeable about planetary boundaries – and abrupt climate change and terrestrial ecosystem loss in particular – must be more bold and insistent in conveying the range and possible severity of threats of global ecosystem collapse, while proposing sufficient solutions. It is not possible to do controlled experiments on the Earth system; all we have is observation based upon science and trained intuition to diagnose the state of Earth's biosphere and suggest sufficient ecological science–based remedies. If Gaia is alive, she can die. Given the strength of life-reducing trends across biological systems and scales, there is a need for a rigorous research agenda to understand at what point the biosphere may perish and Earth die, and to learn what configuration of ecosystems and other boundary conditions may prevent her from doing so. We see death of cells, organisms, plant communities, wildlife populations, and whole ecosystems all the time in nature – extreme cases being desertification and ocean dead zones. There is no reason to dismiss out of hand that **the Earth** System **could die if critical thresholds are crossed**. We need as Earth scientists to better understand how this may occur and bring knowledge to bear to avoid global ecosystem and biosphere collapse or more extreme outcomes such as biological homogenization and the loss of most or even all life. To what extent can a homogenized Earth of dandelions, rats, and extremophiles be said to be alive, can it ever recover, and how long can it last? **The risks of global ecosystem collapse and** the **need for** strong response to achieve global ecological **sustainability** **have been understated** for decades. If indeed there is some possibility that our shared biosphere could be collapsing, there needs to be further investigation of what sorts of sociopolitical responses are valid in such a situation. Dry, unemotional scientific inquiry into such matters is necessary – yet more proactive and evocative political ecological language may be justified as well. We must remember we are speaking of the potential for a period of great dying in species, ecosystems, humans, and perhaps all being. It is not clear whether this global ecological emergency is avoidable or recoverable. It may not be. But we must follow and seek truth wherever it leads us.  
Planetary boundaries have been quite anthropocentric, focusing upon human safety and giving relatively little attention to other species and the biosphere's needs other than serving humans. Planetary boundaries need to be set that, while including human needs, go beyond them to meet the needs of ecosystems and all their constituent species and their aggregation into a living biosphere. Planetary boundary thinking needs to be more biocentric. I concur with Williams (2000) that what is needed is an Earth System–based conservation ethic – based upon an "Earth narrative" of natural and human history – which seeks as its objective the "complete preservation of the Earth's biotic inheritance." Humans are in no position to be indicating which species and ecosystems can be lost without harm to their own intrinsic right to exist, as well as the needs of the biosphere. For us to survive as a species, logic and reason must prevail (Williams 2000). Those who deny limits to growth are unaware of biological realities (Vitousek 1986). There are strong indications humanity may undergo societal collapse and pull down the biosphere with it. The longer dramatic reductions in fossil fuel emissions and a halt to old-growth logging are put off, the worse the risk of abrupt and irreversible climate change becomes, and the less likely we are to survive and thrive as a species. Human survival – entirely dependent upon the natural world – depends critically upon both keeping carbon emissions below 350 ppm and maintaining at least 66% of the landscape as natural ecological core areas and agroecological transitions and buffers. Much of the world has already fallen below this proportion, and in sum the biosphere's terrestrial ecosystem loss almost certainly has been surpassed, yet it must be the goal for habitat transition in remaining relatively wild lands undergoing development such as the Amazon, and for habitat restoration and protection in severely fragmented natural habitat areas such as the Western Ghats. The human family faces an unprecedented global ecological emergency as reckless growth destroys the ecosystems and the biosphere on which all life depends. Where is the sense of urgency, and what are proper scientific responses if in fact Earth is dying? Not speaking of worst-case scenarios – the collapse of the biosphere and loss of a living Earth, and mass ecosystem collapse and death in places like Kerala – is intellectually dishonest. We must consider the real possibility that **we are pulling the biosphere down with us**, setting back or eliminating complex life. The 66% / 44% / 22% threshold of terrestrial ecosystems in total, natural core areas, and agroecological buffers gets at the critical need to maintain large and expansive ecosystems across at least 50% of the land so as to keep nature connected and fully functional. We need an approach to planetary boundaries that is more sensitive to deep ecology to ensure that habitable conditions for all life and natural evolutionary change continue. A terrestrial ecosystem boundary which protects primary forests and seeks to recover old-growth forests elsewhere is critical in this regard. In old forests and all their life lie both the history of Earth's life, and the hope for its future. The end of their industrial destruction is a global ecological imperative. Much-needed dialogue is beginning to focus on how humanity may face systematic social and ecological collapse and what sort of community resilience is possible. There have been ecologically mediated periods of societal collapse from human damage to ecosystems in the past (Kuecker and Hall 2011). What makes it different this time is that the human species may have the scale and prowess to pull down the biosphere with them. It is fitting at this juncture for political ecologists to concern themselves with both legal regulatory measures, as well as revolutionary processes of social change, which may bring about the social norms necessary to maintain the biosphere. Rockström and colleagues (2009b) refer to the need for "novel and adaptive governance" without using the word revolution. Scientists need to take greater latitude in proposing solutions that lie outside the current political paradigms and sovereign powers. Even the Blue Planet Laureates' remarkable analysis (Brundtland et al. 2012), which notes the potential for climate change, ecosystem loss, and inequitable development patterns neither directly states nor investigates in depth the potential for global ecosystem collapse, or discusses revolutionary responses. UNEP (2012) notes abrupt and irreversible ecological change, which they say may impact life-support systems, but are not more explicit regarding the profound human and ecological implications of biosphere collapse, or the full range of sociopolitical responses to such predictions. More scientific investigations are needed regarding alternative governing structures optimal for pursuit and achievement of bioregional, continental, and global sustainability if we are maintain a fully operable biosphere forever. **An economic system based** up**on endless growth that views ecosystems** necessary for planetary habitability **primarily as resources to be consumed cannot exist for long**. Planetary boundaries offer a profoundly difficult challenge for global governance, particularly as increased scientific salience does not appear to be sufficient to trigger international action to sustain ecosystems (Galaz et al. 2012). If indeed the safe operating space for humanity is closing, or the biosphere even collapsing and dying, might not discussion of revolutionary social change be acceptable? Particularly, if there is a lack of consensus by atomized actors, who are unable to legislate the required social change within the current socioeconomic system. By not even speaking of revolutionary action, we dismiss any means outside the dominant growth-based oligarchies. In the author's opinion, it is shockingly irresponsible for Earth System scientists to speak of geoengineering a climate without being willing to academically investigate revolutionary social and economic change as well. It is desirable that the current political and economic systems should reform themselves to be ecologically sustainable, establishing laws and institutions for doing so. Yet there is nothing sacrosanct about current political economy arrangements, particularly if they are collapsing the biosphere. Earth requires all enlightened and knowledgeable voices to consider the full range of possible responses now more than ever.   
One possible solution to the critical issues of terrestrial ecosystem loss and abrupt climate change is a massive and global, natural ecosystem protection and restoration program – funded by a carbon tax – to further establish protected large and connected core ecological sustainability areas, buffers, and agro-ecological transition zones throughout all of Earth's bioregions. Fossil fuel emission reductions must also be a priority. It is critical that humanity both stop burning fossil fuels and destroying natural ecosystems, as fast as possible, to avoid surpassing nearly all the planetary boundaries. In summation, we are witnessing the collective dismantling of the biosphere and its constituent ecosystems which can be described as ecocidal. **The loss of a species is tragic**, of an ecosystem widely impactful, **yet with the loss of the biosphere all life may be gone**. Global ecosystems when connected for life's material flows provide the all-encompassing context within which life is possible. The miracle of life is that life begets life, and the tragedy is that across scales when enough life is lost beyond thresholds, living systems die.

Food crisis causes conflict and instability which kills compromise over AI.

**Tomasik 13** writes[[5]](#footnote-5)

As a general rule, less crop cultivation now probably implies more food stability in the future. One clear example is in the area of topsoil loss as discussed above. John Crawford explains: water will reach a crisis point. This issue is already causing conflicts in India, China, Pakistan and the Middle East and before climate change and food security really hit, the next wars are likely to be fought over unsustainable irrigation. Even moderately degraded soil will hold less than half of the water than healthy soil in the same location. If you're irrigating a crop, you need water to stay in the soil close to the plant roots. [...] Soil erosion is most serious in China, Africa, India and parts of South America. **If the food supply goes down,** then obviously, **the price goes up. The crisis** points **will hit the poorest countries hardest, in particular those which rely on imports**: Egypt, for example, is almost entirely dependent on imports of wheat. The capacity of the planet to produce food is already causing conflict. A lot of people argue that food price hikes caused the Arab spring, and may even have contributed to the recent violence following the release of an anti-Islam film. In general, consumption of more food crops implies higher prices on the world market. From "Food Insecurity and Violent Conflict: Causes, Consequences, and Addressing the Challenges" by Henk-Jan Brinkman and Cullen S. Hendrix (p. 4): **is food insecurity** itself **a cause of conflict? Based on** a review of **recent research, the answer is a highly qualified yes**. **Food insecurity, especially when caused by higher food prices, heightens** the risk of **democratic breakdown, civil conflict**, protest, rioting, **and communal conflict**. The evidence linking food insecurity to interstate conflict is less strong, though **there is** some **historical evidence linking declining ag**ricultural **yields to** periods of **regional conflict in Europe and Asia**. That said, the effects of these rebellions on democracy can be both negative and positive (p. 7): Food insecurity, proxied by low availability of calories for consumption per capita, makes democratic breakdown more likely, especially in higher-income countries, where people expect there to be larger social surpluses that could be invested to reduce food insecurity (Reenock, Bernhard and Sobek, 2007). Though statistical evidence is lacking, rising food prices have been implicated in the wave of demonstrations and transitions from authoritarian rule to fledgling democracy in some countries across North Africa and the Middle East in 2011. There are some historical precedents for this: a bad harvest in 1788 led to high food prices in France, which caused rioting and contributed to the French revolution in 1789; and the wave of political upheaval that swept Europe in 1848 was at least in part a response to food scarcity, coming after three below-average harvests across the continent (Berger and Spoerer 2001). Most of these conflicts occur in poor countries and so are less likely to influence AGI arms races among major world powers. Still, it seems plausible that the **destabilizing consequences of environmental degradation are net harmful for compromise prospects among** the **big players in AGI development** in the long term.

International conflict risks an AI arms race involving military robotics.

**Tomasik 4-3** writes[[6]](#footnote-6)

**Government AI development could go wrong** in several ways. Probably most on LW feel the prevailing scenario is that **governments would botch the process by not realizing** the **risks at hand. It's also possible that governments would use** the **AI for** malevolent, **totalitarian purposes**. It seems that **both** of these bad scenarios **would be exacerbated by international conflict. Greater hostility means countries are more inclined to use AI as a weapon**. Indeed, **whoever builds the first AI can take over the world, which makes building AI the ultimate arms race**. A USA-China race is one reasonable possibility. Arms races encourage risk-taking -- being willing to skimp on safety measures to improve your odds of winning ("Racing to the Precipice"). In addition, the weaponization of AI could lead to worse expected outcomes in general. CEV seems to have less hope of success in a Cold War scenario. ("What? You want to include the evil Chinese in your CEV??") With a pure CEV, presumably it would eventually count Chinese values even if it started with just Americans, because people would become more enlightened during the process. However, when we imagine more crude democratic decision outcomes, this becomes less likely. 5. Ways to avoid an arms race Averting an AI arms race seems to be an important topic for research. It could be partly informed by the Cold War and other nuclear arms races, 'President Reagan and General Secretary Gorbachev signing the INF Treaty in the East Room of the White House.' By White House Photographic Office [Public domain], via Wikimedia Commons: https://commons.wikimedia.org/wiki/File:Reagan\_and\_Gorbachev\_signing.jpg as well as by other efforts at nonproliferation of chemical and biological weapons. Forthcoming robotic and nanotech weapons might be even better analogues of AI arms races than nuclear weapons because these newer technologies can be built more secretly and used in a more targeted fashion. Apart from more robust arms control, other factors might help: Improved international institutions like the UN, allowing for better enforcement against defection by one state. In the long run, a scenario of global governance would likely be ideal for strengthening international cooperation, just like nation states reduce intra-state violence. Better construction and enforcement of nonproliferation treaties. Improved game theory and international-relations scholarship on the causes of arms races and how to avert them. (For instance, arms races have sometimes been modeled as iterated prisoner's dilemmas with imperfect information.) How to improve verification, which has historically been a weak point for nuclear arms control. (The concern is that if you haven't verified well enough, the other side might be arming while you're not.) Moral tolerance and multicultural perspective, aiming to reduce people's sense of nationalism. (In the limit where neither Americans nor Chinese cared which government won the race, there would be no point in having the race.) Improved trade, democracy, and other forces that historically have reduced the likelihood of war. 6. Are these efforts cost-effective? World peace is hardly a goal unique to effective altruists (EAs), so we shouldn't necessarily expect low-hanging fruit. On the other hand, projects like nuclear nonproliferation seem relatively underfunded even compared with anti-poverty charities. I suspect more direct MIRI-type research has higher expected value, but among EAs who don't want to fund MIRI specifically, encouraging donations toward international cooperation could be valuable, since it's certainly a more mainstream cause. I wonder if GiveWell would consider studying global cooperation specifically beyond its indirect relationship with catastrophic risks. 7. Should we publicize AI arms races? When I mentioned this topic to a friend, he pointed out that we might not want the idea of AI arms races too widely known, because then governments might take the concern more seriously and therefore start the race earlier -- giving us less time to prepare and less time to work on FAI in the meanwhile. From David Chalmers, "The Singularity: A Philosophical Analysis" (footnote 14): When I discussed these issues with cadets and staff at the West Point Military Academy, the question arose as to whether the US military or other branches of the government might attempt to prevent the creation of AI or AI+, due to the risks of an intelligence explosion. The consensus was that they would not, as such prevention would only increase the chances that AI or AI+ would first be created by a foreign power. One might even expect an AI arms race at some point, once the potential consequences of an intelligence explosion are registered. According to this reasoning, although AI+ would have risks from the standpoint of the US government, the risks of Chinese AI+ (say) would be far greater. We should take this information-hazard concern seriously and remember the unilateralist's curse. If it proves to be fatal for explicitly discussing AI arms races, we might instead encourage international cooperation without explaining why. Fortunately, it wouldn't be hard to encourage international cooperation on grounds other than AI arms races if we wanted to do so. Also note that a government-level arms race could easily be preferable to a Wild West race among a dozen private AI developers where coordination and compromise would be not just difficult but potentially impossible. Of course, if we did decide it was best for governments to take AI arms races seriously, this would also encourage private developers to step on the gas pedal. That said, once governments do recognize the problem, they may be able to impose moratoria on private development. How concerned should we be about accidentally accelerating arms races by talking about them? My gut feeling is it's not too risky, because It's hard to contain the basic idea. Super-powerful AI is already well known not just by governments but even in popular movies. Developing verification measures, technology restrictions, and so on require governments knowing what technology they're dealing with. If governments can think about these issues ahead of time (decades before strong AI becomes feasible), they're more likely to go for cooperation and less likely to panic and build up their own defenses, because they see that there's time for negotiations to potentially work before losing that much ground. Right now most AI research appears to be done in public, so there's not a huge cost for a given country in delaying at this point. Most risk analysts don't express concerns like these too much when talking about military arms races. Of course, there's selection bias; maybe most of the military does think it's dangerous to talk about these issues in public, and we only hear form the minority that defects from this view. But I've never heard criticism against people who talk too much about arms races in public, except this one comment from my friend. Talking about arms-race scenarios specifically makes it much more clear why we need global governance and improved cooperation. It's more persuasive than just saying, "Wouldn't it be great if the world could sing Kumbaya?" That said, I remain open to being persuaded otherwise, and it seems important to think more carefully about how careful to be here. The good news is that the information hazards are unlikely to be disastrous, because all of this material is already publicly available somewhere. In other words, the upsides and downsides of making a bad judgment seem roughly on the same order of magnitude. 8. How do our prospects look? In Technological change and nuclear arms control (1986), Ted Greenwood suggests that arms control has historically had little counterfactual impact: In no case has an agreement inhibited technological change that the United States both actually wanted to pursue at the time of agreement and was capable of pursuing during the intended duration of the agreement. Only in one area of technological innovation (i.e., SALT II constraints on the number of multiple independently-targetable reentry vehicles, or MIRVs, on existing missiles) is it possible that such agreements actually inhibited Soviet programs, although in another (test of new light ICBMs [intercontinental ballistic missiles]) their program is claimed by the United States to violate the SALT II Treaty that the Soviets have stated they will not undercut. In "Why Military Technology Is Difficult to Restrain" (1987), Greenwood adds that the INF Treaty was arguably more significant, but it still didn't stop technological development, just a particular application of known technology. In other domains we also see competition prevail over cooperation, such as in most markets, where usually there are at least several companies vying for customers. Of course, this is partly by social design, because we have anti-trust laws. Competition in business makes companies worse off while making consumers better off. Likewise, competition to build a quick, hacky AI makes human nations worse off while perhaps making the unsafe AIs better off. If we care some about the unsafe AIs for their own sakes as intelligent preference-satisfying agents, then this is less of a loss than it at first appears, but it still seems like there's room to expand the pie, and reduce suffering, if everyone takes things more slowly. Maybe the best hope comes from the possibility of global unification. There is just one US government, with a monopoly on military development. If instead we had just one world government with a similar monopoly, arms races would not be necessary. Nationalism has been a potent force for gluing countries together and if channeled into internationalism, perhaps it could help to bind together a unified globe. Of course, we shouldn't place all our hopes on a world government and need to prepare for arms-control mechanisms that can also work with the present-day nation-state paradigm. 9. Robot arms races **Robots require AI that contains clear goal systems and** an **ability to act effectively** in the world. **Thus,** they seem like a reasonable candidate for where artificial general intelligence will first emerge. Facebook's image-classification algorithms and Google's search algorithms don't need general intelligence, with many human-like cognitive faculties, as much as a smart robot does. **Military robotics seems** like **one of the most likely reasons that** a robot **arms race might develop**. Indeed, to some degree **there's already an arms race to build drones and autonomous weapons** systems. Mark Gubrud: Killer robots are not the only element of the global technological arms race, but they are currently the most salient, rapidly-advancing and fateful. If we continue to allow global security policies to be driven by advancing technology, then **the arms race** will continue, and it **may** even **reheat to Cold War levels, with multiple players** this time. Robotic armed forces controlled by AI systems too complex for anyone to understand will be set in confrontation with each other, and sooner or later, our luck will run out.

AI arms race causes extinction, outweighs nuclear war, and turns other moral theories.

**Shulman and Armstrong 11** write[[7]](#footnote-7)

II. **An AI arms race may be “winner-take-all”** The threat of an AI arms race does not appear to be primarily about the direct application of AI to warfare. While automated combat systems such as drone aircraft have taken on greatly increased roles in recent years (Singer, 2009; Arkin, 2009), they do not greatly disrupt the balance of power between leading militaries: slightly lagging states can use older weapons, including nuclear weapons, to deter or defend against an edge in drone warfare. Instead, the military impact of an intelligence explosion would seem to lie primarily in the extreme acceleration in the development of new capabilities. **A state might launch an AI Manhattan Project to gain** a few months or **years of sole access** to advanced AI systems**, and then initiate an intelligence explosion** to greatly increase the rate of progress. Even if rivals remain only a few months behind chronologically, they may therefore be left many technological generations behind until their own intelligence explosions. It is much more probable that such a large gap would allow the leading power to safely disarm its nuclear-armed rivals than that any specific technological generation will provide a decisive advantage over the one immediately preceding it. If states do take AI potential seriously, how likely is it that a government's “in-house” systems will reach the the point of an intelligence explosion months or years before competitors? Historically, there were substantial delays between the the first five nuclear powers tested bombs in 1945, 1949. 1952, 1960, and 1964. The Soviet Union's 1949 test benefited from extensive espionage and infiltration of the Manhattan Project, and Britain's 1952 test reflected formal joint participation in the Manhattan Project. If the speedup in progress delivered by an intelligence explosion were large, such gaps would allow the leading power to solidify a monopoly on the technology and military power, at much lower cost in resources and loss of life than would have been required for the United States to maintain its nuclear monopoly of 1945-1949. **To the extent that states distrust their rivals with** such **complete power**, or wish to exploit it themselves, **there would be strong incentives to vigorously push forward AI research**, and to ensure government control over systems capable of producing an intelligence explosion. In this paper we will discuss factors affecting the feasibility of such a localized intelligence explosion, particularly the balance between internal rates of growth and the diffusion of or exchange of technology, and consider historical analogs including the effects of the Industrial Revolution on military power and nuclear weapons. III. Accidental risks and negative externalities A second critical difference between the nuclear and AI cases is in the expected danger of development, as opposed to deployment and use. Manhattan Project scientists did consider the possibility that a nuclear test would unleash a self-sustaining chain reaction in the atmosphere and destroy all human life, conducting informal calculations at the time suggesting that this was extremely improbable. A more formal process conducted after the tests confirmed the earlier analysis (Konopinski, Marvin, & Teller, 1946), although it would not have provided any protection had matters been otherwise. The historical record thus tells us relatively little about the willingness of military and civilian leaders to forsake or delay a decisive military advantage to avert larger risks of global catastrophe. In contrast, **numerous scholars have argued that advanced AI poses a nontrivial risk of** catastrophic outcomes, including **human extinction.** (Bostrom, 2002; Chalmers, 2010; Friedman, 2008; Hall, 2007; Kurzweil, 2005; Moravec, 1999; Posner, 2004; Rees, 2004; Yudkowsky, 2008). Setting aside anthropomorphic presumptions of rebelliousness, a more rigorous argument (Omohundro, 2007) relies on the instrumental value of such behavior for entities with a wide variety of goals that are easier to achieve with more resources and with adequate defense against attack. Many decision algorithms could thus appear benevolent when in weak positions during safety testing, only to cause great harm when in more powerful positions, e.g. after extensive self-improvement. Given abundant time and centralized careful efforts to ensure safety, it seems very probable that these risks could be avoided: development paths that seemed to pose a high risk of catastrophe could be relinquished in favor of safer ones. However, the context of an arms race might not permit such caution. A risk of **accidental AI disaster would threaten all of humanity**, while the benefits of being first to develop AI would be concentrated, creating a collective action problem insofar as tradeoffs between speed and safety existed. A first-pass analysis suggests a number of such tradeoffs. Providing more computing power would allow AIs to either operate at superhumanly fast timescales or to proliferate very numerous copies. Doing so would greatly accelerate progress, but also render it infeasible for humans to engage in detailed supervision of AI activities. To make decisions on such timescales AI systems would require decision algorithms with very general applicability, making it harder to predict and constrain their behavior. Even obviously **risky systems might be embraced for competitive advantage**, and the powers with the most optimistic estimates or cavalier attitudes regarding risk would be more likely to take the lead. IV. Barriers to AI arms control Could an AI arms race be regulated using international agreements similar to those governing nuclear technology? In some ways, there are much stronger reasons for agreement: the stability of **nuclear deterrence, and** the **protection afforded by existing nuclear powers to their allies, mean that** the **increased threat of a new nuclear power is not overwhelming**. No nuclear weapons have been detonated in anger since 1945. **In contrast,** simply **developing AI capable of producing an intelligence explosion puts all states at risk** from the effects of accidental catastrophe, or the military dominance engendered by a localized intelligence explosion. However, AI is a dual-use technology, with incremental advances in the field offering enormous economic and humanitarian gains that far outweigh near-term drawbacks. Restricting these benefits to reduce the risks of a distant, novel, and unpredictable advance would be very politically challenging. Superhumanly intelligent AI promises even greater rewards: advances in technology that could vastly improve human health, wealth, and welfare while addressing other risks such as climate change. Efforts to outright ban or relinquish AI technology would seem to require strong evidence of very high near-term risks. However, agreements might prove highly beneficial if they could avert an arms race and allow for more controlled AI development with more rigorous safety measures, and sharing of the benefits among all powers. Such an agreement would face increased problems of verification and enforcement. Where nuclear weapons require rare radioactive materials, large specialized equipment, and other easily identifiable inputs, AI research can proceed with only skilled researchers and computing hardware. Verification of an agreement would require incredibly intrusive monitoring of scientific personnel and computers throughout the territory of participating states. Further, while violations of nuclear arms control agreements can be punished after the fact, a covert intelligence explosion could allow a treaty violator to withstand later sanctions. These additional challenges might be addressed in light of the increased benefits of agreement, but might also become tractable thanks to early AI systems. If those systems do not themselves cause catastrophe but do provide a decisive advantage to some powers, they might be used to enforce safety regulations thereafter, providing a chance to “go slow” on subsequent steps. V. Game-theoretic model of an AI arms race In the full paper, we present a simple game-theoretic model of a risky AI arms race. In this model, the risk of accidental catastrophe depends on the number of competitors, the magnitude of random noise in development times, the exchange rate between risk and development speed, and the strength of preferences for developing safe AI first. VI. Ethical implications and responses The above analysis highlights two important possible consequences of advanced AI: a disruptive change in international power relations and a risk of inadvertent disaster. From an ethical point of view, the accidental risk deserves special attention since it threatens human extinction, not only killing current people but also denying future generations existence. (Matheny, 2007; Bostrom, 2003). **While AI systems would outlive humanity, AI systems might lack key features contributing to moral value, such as** individual **identities, play, love, and happiness** (Bostrom, 2005; Yudkowsky, 2008). Extinction risk is a distinctive feature of AI risks: **even a catastrophic nuclear war or** engineered **pandemic that killed billions would still likely allow survivors** to eventually rebuild human civilization**, while AIs killing billions would likely not** leave survivors. (Sandberg & Bostrom, 2008). However, a national monopoly on an AI intelligence explosion could also have permanent consequences if it was used to stably establish its position. Permanent totalitarianism is one possibility (Caplan, 2008). We conclude by discussing some possible avenues for reducing these long-term risks.

## Advantage 2 is Warming

The PP is key to solve warming – overcomes cognitive biases which kill reform.

**Dana 9** writes[[8]](#footnote-8)

Critics of the PP have argued that it is indeterminate and hence basically useless because it can never reveal how much precaution is due in a given case. But many principles and practices are indeterminate in their precise results and policy implications.23 As long as invocation of the PP will draw more attention to huge costs associated with highly uncertain but terrible scenarios, and as long as we believe that heuristic biases will otherwise cause too little attention to be paid to those scenarios, invocation of the PP in the climate change context helpful in producing a more balanced discourse — whatever the ultimate policy choices. Invocation of **the PP, by itself, may be enough to balance** the **policy discourse on climate change**, even if policymakers continue to use traditional quantified CBA, and just include a numerical probability for catastrophic climate change in the absence of regulatory action and a numerical estimate of the expected costs of such catastrophic change. The PP can serve as a means of framing the quantitative CBAs as only a partial and potentially misleading picture of the danger of choosing regulatory inaction. **A** more aggressive but nonetheless **justifiable deployment** of the PP **would be to use it as part of the rationale for not quantifying** the **probability and expected costs of catastrophic scenarios.** This refusal to quantify could be scientifically justified given how little we know about the real probability distribution of catastrophic scenarios.24 **It would** also **counteract the tendency to overweigh** the **certain costs of prevention** and mitigation**, and** to excessively discount or **ignore** the **future costs from** regulatory **inaction**. Why would leaving open-ended (and hence ambiguous) the probability of catastrophic climate change scenarios be likely to result in a relatively heavier weighing of the uncertain costs than would probably occur if some sort of numerical probability distribution were assigned to catastrophic scenarios? From a pure rational choice perspective, perhaps it should not occur. The **psychological lit**erature nevertheless **suggests that** while people are risk-seeking in the avoidance of certain losses as against the avoidance of possible losses when there is numerical probability or probability distribution for the possible losses, people are risk-seeking in the avoidance of truly ambiguous possible losses —that is, losses that are so uncertain that no numerical estimate of the probability or probability distribution of their occurrence is available. Although there is disagreement regarding the definition of "ambiguity" and "ambiguity aversion," the basic idea is that ambiguity is "an intermediate state between ignorance (i.e., complete lack of knowledge) and risk (in which a probability distribution is specified)",25 and that **people are more averse to an ambiguous bet than** to **a quantified risk of loss**. The depth and robustness of the phenomenon of ambiguity aversion is, to be sure, a matter of debate,26 as is the robustness of the tendency for risk-seeking in the avoidance of certain losses. But if people are "irrationally" risk-seeking in avoiding both certain losses and ambiguous losses, then a decision framed as a choice between the avoidance of a certain loss on the one hand and the avoidance of an ambiguous loss on the other may be one where irrational biases cancel out where there is no departure from what rational choice theory would dictate.27 In other words, **where the choice**s **[is] between** the **certain losses** entailed **in prevention** and mitigation efforts **and** the **ambiguous losses** associated **with catastrophic scenarios, heuristic biases may**, on net, **not distort** the **decision-making.**

Warming causes extinction. **Flournoy 12** writes[[9]](#footnote-9)

In the Online Journal of Space Communication , Dr. Feng Hsu, a  NASA scientist at Goddard Space Flight Center, a research center in the forefront of science of space and Earth, writes, “The evidence of global warming is alarming,” noting the **potential for** a **catastrophic** planetary **climate change is real** and troubling (Hsu 2010 ) . Hsu and his NASA colleagues were engaged in monitoring and analyzing climate changes on a global scale, through which they received first-hand scientific information and data relating to global warming issues, including the dynamics of polar ice cap melting. After discussing this research with colleagues who were world experts on the subject, he wrote: I now have no doubt global temperatures are rising, and that global warming is a serious problem confronting all of humanity. No matter whether these trends are due to human interference or to the cosmic cycling of our solar system, there are two basic facts that are crystal clear: (a) **there is overwhelming scientific evidence showing positive correlations between** the level of **CO2** concentrations in Earth’s atmosphere **with respect to** the historical fluctuations of **global temperature changes**; and (b) **the overwhelming majority of the** world’s **scientific community is in agreement about** the **risks of** a potential **catastrophic** global **climate change**. That is, if we humans continue to ignore this problem and do nothing, if we continue dumping huge quantities of greenhouse gases into Earth’s biosphere, humanity will be at dire risk (Hsu 2010 ) . As a technology risk assessment expert, Hsu says he can show with some confidence that the planet will face more risk doing nothing to curb its fossil-based energy addictions than it will in making a fundamental shift in its energy supply. “This,” he writes, “is because **the risks of** a **catastrophic anthropogenic climate change can be** potentially **the extinction of human species**, a risk that is simply too high for us to take any chances” (Hsu 2010 ).

## Advantage 3 is the World Trade Organization

The WTO is using its trade authority to challenge environmental protection and prioritize resource extraction.

**Global Exchange 11** writes[[10]](#footnote-10)

5. The WTO Is Destroying the Environment **The WTO is being used by corporations to dismantle** hard-won local and national **environmental protections, which are attacked as “barriers to trade.”** The very first WTO panel ruled that a provision of the US Clean Air Act, requiring both domestic and foreign producers alike to produce cleaner gasoline, was illegal. The WTO declared illegal a provision of the Endangered Species Act that requires shrimp sold in the US to be caught with an inexpensive device allowing endangered sea turtles to escape. **The WTO is attempting to deregulate industries including logging, fishing, water** utilities**, and energy distribution, which will lead to further exploitation of** these **natural resources.**

The PP challenges WTO authority over environmental issues. This is key to generating momentum to shut down the WTO.

**Mokhiber and Weissman 99** write[[11]](#footnote-11)

**The WTO eviscerates the Precautionary Principle**. **WTO rules** generally **block countries from acting in response to potential risk** -- requiring a probability before governments can move to resolve harms to human health or the environment. The WTO squashes diversity. WTO rules establish international health, environmental and other standards as a global ceiling through a process of "harmonization;" countries or even states and cities can only exceed them by overcoming high hurdles. The WTO operates in secrecy. Its tribunals rule on the "legality" of nations' laws, but carry out their work behind closed doors. **The WTO limits governments' ability to use their purchasing dollar for** human rights, **environmental**, worker rights and other non-commercial **purposes**. In general, **WTO rules state that governments can make purchases based only on quality and cost** considerations. The WTO disallows bans on imports of goods made with child labor. In general, WTO rules do not allow countries to treat products differently based on how they were produced -- irrespective of whether made with brutalized child labor, with workers exposed to toxics or with no regard for species protection. The WTO legitimizes life patents. WTO rules permit and in some cases require patents or similar exclusive protections for life forms. Some of these problems, such as the WTO's penchant for secrecy, could potentially be fixed, but the core problems -- **prioritization of commercial** over other **values**, the constraints on democratic decision-making **and** the **bias against local economies** -- cannot, for they **are inherent in the WTO itself. Because of these** unfixable **problems, the W**orld **T**rade **O**rganization **should be shut down**, sooner rather than later. That doesn't mean interim steps shouldn't be taken. It does mean that **beneficial reforms will** focus not on adding new areas of competence to the WTO or enhancing its authority, even if the new areas appear desirable (such as labor rights or competition). Instead, the reforms to pursue are those that reduce or **limit the WTO's power -- for example, by denying it** the **authority to invalidate laws passed pursuant to international environmental agreements**, limiting application of WTO agricultural rules in the Third World, or eliminating certain subject matters (such as essential medicines or life forms) from coverage under the WTO's intellectual property agreement. **These measures** are necessary and desirable in their own right, and they **would help generate momentum to close down the WTO.**

WTO rules interfere with human rights protections. **Global Exchange 11** writes[[12]](#footnote-12)

3. The WTO Tramples Labor and Human Rights **WTO rules put** the “rights” of **corporations** to profit **over human** and labor **rights. The WTO encourages a ‘race to the bottom’** in wages **by pitting workers against each other rather than promoting internationally recognized labor standards. The WTO has ruled** that **it** is **illegal** for a government **to ban a product** based on the way it is **produced**, such as **with child labor. It has also ruled that governments cannot take into account** “non commercial values” such as human rights, or **the behavior of companies that do business with** vicious **dictatorships** such as Burma **when making purchasing decisions.**

Human rights norms solve global WMD conflict.

**Burke-White 4** writes[[13]](#footnote-13)

This Article presents a strategic--as opposed to ideological or normative--argument that the promotion of human rights should be given a more prominent place in U.S. foreign policy. It does so by suggesting a correlation between the domestic human rights practices of states and their propensity to engage in aggressive international conduct. Among the chief threats to U.S. national security are acts of aggression by other states. Aggressive acts of war may directly endanger the United States, as did the Japanese bombing of Pearl Harbor in 1941, or they may require U.S. military action overseas, as in Kuwait fifty years later. **Evidence** from the post-Cold War period  [\*250]  **indicates** that **states that** systematically **abuse** their own citizens' **human rights are** also those **most likely to engage in aggression**. To the degree that **improvements in** various states' human **rights** records **decrease** the **likelihood of** aggressive **war**, a foreign **policy informed by** human **rights can significantly enhance** U.S. and **global security**. Since 1990, a state's domestic human rights policy appears to be a telling indicator of that state's propensity to engage in international aggression. A central element of U.S. foreign policy has long been the preservation of peace and the prevention of such acts of aggression. [2](http://www.lexis.com/research/retrieve?_m=62d5bddd50e555db7dfb40b14668cef6&csvc=bl&cform=searchForm&_fmtstr=FULL&docnum=1&_startdoc=1&wchp=dGLbVzW-zSkAW&_md5=a81b07a0a90d95be59f9b7bb9d939181#n2) If the correlation discussed herein is accurate, it provides U.S. policymakers with a powerful new tool to enhance national security through the promotion of human rights. A strategic linkage between national security and human rights would result in a number of important policy modifications. First, it changes the prioritization of those countries U.S. policymakers have identified as presenting the greatest concern. Second, it alters some of the policy prescriptions for such states. Third, it offers states a means of signaling benign international intent through the improvement of their domestic human rights records. Fourth, it provides a way for a current government to prevent future governments from aggressive international behavior through the institutionalization of human rights protections. Fifth, **it addresses the** particular **threat of** human rights abusing **states obtaining** weapons of mass destruction (**WMD**). Finally, it offers a mechanism for U.S.-U.N. cooperation on human rights issues.

## Contention 4 is Solvency

The PP is the best middle ground between industry and regulation. **Sachs 11** writes[[14]](#footnote-14)

Critics are overlooking that **the Principle can provide** a workable **accommodation between the needs of industry and** the need to ensure harm prevention and **adherence to ecological limits.** Specifically, **putting government in a** risk **gatekeeping role serves** several **important purposes, including:**  **Ensuring that the applicant** is competent to engage in the activity and **has** the **required expertise and resources;**  **Regulating** the **location of** potentially **risky activities** and ensuring that they occur in places where risks to the public are minimized;  **Ensuring that activities** presenting serious threats to public health or the environment can be prohibited (or **have safety precautions** placed on them) **before harm occurs;**  **Ensuring, through** establishing **a uniform review process** for every applicant**, that the cumulative amount of a risky activity does not exceed limits that would be damaging to the environment** or human health; **and**  **Minimizing risks while further research is conducted and making** that **research the responsibility of firms that will benefit the most** from the activity. I am not trying to defend every permitting and licensing scheme, of course. Government permitting programs can be burdensome and prone to political favoritism and rent-seeking behavior. They are often complex. If inadequately funded and staffed, a governmental review may be no more than a fig leaf of risk management (witness the Deepwater Horizon Oil Spill and the lax oversight of the Minerals Management Service). But the long-standing practice in U.S. law of establishing government agencies as ex ante gatekeepers for risk does suggest that the Strong Precautionary Principle cannot be so easily dismissed. It is not as alien to U.S. law and values as the critics would have us believe, and it hardly seems “paralyzing” in the many contexts in which it has been applied.

General indicts to the PP are irrelevant. **Dana 9** writes[[15]](#footnote-15)

Is the precautionary principle (PP) incoherent and therefore irrational to use as a guide or tool in policymaking? A number of thoughtful scholars have argued as much, and their arguments, on their own terms, make a good deal of sense. These **scholars**, however, **are arguing about the PP** in the abstract**, asking whether it coheres as a matter of abstract logic**, and it may not – indeed it probably does not. **But the PP does make sense in particular, and** very **important, contexts.** Rather than asking whether the PP is rational in general, we should be asking whether or not there are contexts in which it is rational to use the PP as a policy tool. According to one much-cited formulation, the PP means that "[w]hen an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically."1 Different versions of the PP build on the idea of "precautionary measures,” and what this actually means or encompasses. In its strong forms, the PP prescribes that an activity or product posing a risk to human health or the environment should be flatly prohibited until it is scientifically proven that the activity or product, in fact, will not harm human health or the environment. In its weak forms, the PP can take 1 “Wingspread Statement on the Precautionary Principle” (1998), online: <www.gdrc.org/u-gov/precaution- 3.html>. 2 the form of a mere cautious attitude, democratic inclusion, and/or additional efforts at fact-finding, but no particular regulatory prohibitions or restrictions. In academic discourse, the critics of PP tend to emphasize its strong forms, apparently because these forms of PP lead to hard-to-defend results in certain cases. Conversely, academic defenders of PP tend to emphasize its weaker forms, apparently because these forms of PP can be squared with almost any decision and never lead to hard-to-defend results.2 This article defines the PP primarily based on what it is not: it is not quantitative cost-benefit or cost-cost analysis of the sort we associate with the Office of Management and Budget in the United States and U.S. policymaking and policy discourse generally.3 In this definition, the PP is a form of analysis in which the costs of a possible environmental or health risk are not quantified, or if they are, any quantification is likely to be inadequate to capture the full extent of the costs of not taking regulatory measures to mitigate or avoid the risk. So defined, the PP is a more "rational" approach compared to cost-benefit or cost-cost because, in certain contexts, the costs associated with an environmental or health risk will tend to be relatively under-weighed without the application of the PP to account for non-quantifiable risk. After a brief discussion of the rationality and utility of the PP in Part II, this article addresses two important contexts in which it is rational to apply the PP. Part III 2 For a thoughtful overview and treatment of the PP, see Douglass A. Kysar, “It Might Have Been: Risk, Precaution and Opportunity Costs” (2006) 22 J. Land Use & Envtl. L. 1. For a discussion of the definitional issues surrounding the PP, see David A. Dana, “A Behavioral Economic Defense of the Precautionary Principle” (2003) 97 Nw. U. L. Rev. 1315. . 3 For a good comparative discussion of the PP and CBA, see generally Gregory N. Mandel & James Thuo Gathii, “Cost-Benefit Analysis Versus the Precautionary Principle: Beyond Cass R. Sustein’s Law of Fear” (2006) 2006 U. Ill. L. Rev. 1037. 3 examines climate change, especially as it would affect developed northern hemisphere countries, and Part IV discusses emerging nanotechnology, as it is used in a wide array of consumer products. These **contexts are very different, and so** too **is the contextual justification for the PP. In the context of climate change,** the **heuristic bias** in favour of avoiding certain losses **may lead to an under-weighing of catastrophic scenarios** of climate change, at least in the context of U.S. policymaking. Part III of this article explores how prospect theory (also called loss aversion), ambiguity aversion, cost-benefit analysis (CBA) and the PPT may interact in this context. Part IV discusses the case of emerging technologies, in which the products are developed and marketed by for-profit entities that have strong monetary incentives to explore and document the benefits of the products and much weaker incentives to explore and document any possible adverse environmental or health effects associated with the products. In the CBA framework, regulators tend to weigh known benefits against known costs or at least known risks. So framed, this weighing may pay too little attention to unknown costs and unknown risks that have intentionally not been explored by market actors. In both the cases of climate change and emerging technologies, application of the PP can correct what would otherwise be a tendency to under-weigh the costs of not taking action to prevent or mitigate possible environmental and health risks. The PP can justify directing less attention to “bottom line” quantitative estimates of the costs of unmitigated climate change and more attention to avoiding terrible but highly uncertain 4 climate change scenarios.4 With nanotechnology, the PP can function as a means of focusing less attention on whether or not nanotechnology is harmful or safe given current knowledge and more attention to developing ways to produce more and better knowledge about the risks posed by nanotechnology. **The debate over the PP** versus CBA **has** often **been too abstract** and lacking in context. **A more productive approach would be to** instead **ask** when – **in what contexts** — **does it make sense** to apply the PP and when does it not? This article is an initial contribution to that re-framed debate.

The PP is key to sustainability. **Grant and Quiggin 13** writes[[16]](#footnote-16)

6. Concluding comments Informally stated, **the P**recautionary **P**rinciple **has** strong **intuitive appeal**, particularly in the context of environmental regulation. **In dealing with** complex, **fragile and poorly understood natural systems, it seems to make sense ‘to err on the side of caution.’** However, this way of putting things points out the difficulties in formalizing the Precautionary Principle. ‘To err’ means to commit an error, and it is obviously difficult to include a prescription for error in a formal theory of decision under uncertainty. Yet **decisions are prone to errors arising from** an incomplete understanding of the problem at hand, and of the likelihood that some **contingencies** will **not** be **taken into account**. It seems desirable to take account of this reality in formulating a procedure for making decisions. In this paper, we have addressed the question in relation to the standard Bayesian model of decision theory, developed in the framework of an extensive-form game. We have argued that the Precautionary Principle is best understood, not as a modification of Bayesian decision theory, but rather as a heuristic constraint on the application of that theory; that is, as a response to the recognition that the outcomes of decisions may be affected by unforeseen contingencies. Heuristic constraints such as the Precautionary Principle must be satisfied before it is appropriate to apply the tools of Bayesian decision theory. **The P**recautionary **P**rinciple **is most commonly applied in relation to** interactive decisions, involving judgments as to whether or not to proceed with projects or innovations that may pose **unforeseen risks**. In this context, **the P**recautionary **P**rinciple may be regarded as a procedural rule that **places** the **burden of proof on proponents of activities subject to poorly-understood risks**. Under the Precautionary Principle, **proponents must convince policy makers** not only **that** the **expected benefits exceed** the **expected costs but also that the project will not be subject to** any **significant unanticipated adverse outcomes.**

## Next is Theory Preempts

1. Debating about the PP is key to topic education.

**Schettler and Raffensperger 4** write[[17]](#footnote-17)

**Proof is a value-laden concept that integrates** statistics, **empirical observation, inference**, research design **and research** agendas **in**to **a political** and social **context.** This section discusses the uses and misuses of some of the criteria commonly used to establish proof. Strict criteria may be useful for establishing “facts”, but by the time a fact or causal relationship has been established by rigorous standards of proof, considerable avoidable harm may already have occurred. The effects of lead exposure on children’s brain development or asbestos on lung cancer risk are examples. In each case, people were damaged over many decades, long after substantial evidence of serious health effects was established, while lead and asbestos advocates contested epidemiological “proof” of causation. **Guided by the p**recautionary **p**rinciple**, people are** as **concerned with** the weight of the available evidence as they are with establishing facts by **rigorous standards of proof**. The weight of the evidence can guide preventive action, whereas waiting for proof may allow damage to occur. By convention, a considerable amount of consistent evidence is necessary to establish factual “proof” of a cause-and-effect relationship. Traditionally, in a study of the relationship between two variables, a correlation is said to be statistically significant only if the results show the two to be linked, 5. Why is a precautionary approach needed? 71 independent of other factors, with greater than 95% likelihood that the positive results of the study did not occur by chance. But correlation does not establish causation. In epidemiology, a series of additional criteria, for example, those of Hill (1965), are usually added before causation can be claimed. Hill criteria include not only establishment of a statistically significant correlation between two variables but also require that the causal variable precede the effect, a dose–response relationship, elimination of sources of bias and confounding, coherence with other studies and understanding of a plausible biological mechanism. Tobacco smoking, for example, was known to be associated with lung cancer for more than 50 years before a plausible biological mechanism was finally described. At that point, denying that tobacco “causes” cancer became impossible. People’s adherence to conventions or choices among criteria expresses their willingness to make type I or type II errors. A type I error is the mistake of concluding that an association or phenomenon exists when, in truth, it does not. Conversely, a type II error is the mistake of failing to recognize an association or phenomenon when it does exist. Each kind of error has consequences. Type II errors may, for example, lead people to allow a harmful activity to go forward and are the inevitable result of a consistent bias towards avoiding type I errors. Type I errors will result in invalid concerns about a product or activity and may lead to unnecessary restrictions. Establishing type I and type II error rates is a choice that reflects certain biases and is largely done by convention, often without considering the consequences. For example, by convention, interpretations of scientific data generally favour type II over type I errors. People generally require strong evidence that something is scientifically “true” before being willing to say so. An historical basis for error bias **A general theme that has gained currency** in many countries **is that people** are autonomous individuals who **are free** to live as they wish and **do as they want, provided that they do not cause harm to others.** This concept has set up a tension between the individual and society at large in terms of establishing the limits of tolerance and defining harm. In On Liberty, first published in 1859, John Stuart Mill (1978 (1859)) explored the nature and limits of power that can be legitimately exercised by society over the individual. He concluded that the only purpose for which power can be rightfully exercised over any member of a civilized community, against his or her will, is to prevent harm to others. Mill was concerned that, in a democratic society, the majority would set the limits to tolerance – that the majority would interfere with the creative individual’s inclination to invent and develop and to explore new frontiers. He also worried that the majority would go so far as to define “harm”, using inappropriate assertions of “harm” as a blockade to progress. In short, he feared the “tyranny of the majority” and their inclination to favour the status quo. **This** tension **is at the heart of many of today’s policy debates.** Not only must harm be defined but **people** also **have to decide how to act** or how to legitimately exercise power **when** the probability of harm (**risk**) **is uncertain**. Though decisions must be based on what is known at the time, **if “proof”** of harm **is required before** limiting an activity or **choosing an alternative**, as Mill would have, **there is a risk of failing to prevent harm**. Seeing how Mill’s fears are reflected in today’s policies in many countries throughout the world is easy. In general, the burden of proof of harm falls on the general public or individuals who assert that another party has injured them. High standards of “proof” add to this burden, even when the weight of the evidence suggests that harm has occurred or is likely. In other words, a **bias towards type II errors** – established by convention in interpreting scientific data – **has** also **crept into** social, political and judicial **policy. Asking whether such a bias is appropriate for preventing harm** or for choosing among optional human activities **is fully legitimate**. Further, it may be legitimately ask how such a bias is likely to influence the ways that human activities alter complex ecological systems that define the world to be left to future generations **– a consideration at the core of sustainability.**

Theoretical discussions must precede specific policy analysis. Analyzing principles is key to real world environmental policy making.

Samuelsson, 2010:

(Environmental Pragmatism and Environmental Philosophy: A Bad Marriage.Winter 2010. Lars Samuelsson, Researcher AT The Department of Historical, Philosophical, And Religious Studies At Umea University)

With regard to the worry expressed by environmental pragmatists that such theoretical discussions in environmental philosophy stand in the way of developing (good) environmental policy, I believe that this worry is highly exaggerated. I think it both (1) overestimates the practical importance of environmental philosophy, and (2) underestimates the practical significance of investigating questions concerning intrinsic value in nature: (a) to think that environmental philosophy has the power of significantly slowing down the environmental movement (or of considerably speeding it up) is to overestimate the importance of environmental philosophy within that movement. Environmental philosophy is but one part of the environmental movement, and I have seen no compelling arguments to the effect that it is such an important part as to have this power. (b) On the other hand, there is at least some evidence that both the environmental movement, and political decision makers, have been influenced by theoretical discussions within environmental ethics, such as those concerning intrinsic value in nature. 26 When Light and Katz take the overriding aim to be “finding workable solutions to environmental problems now,” this is certainly a praiseworthy initiative, and in one respect this aim is indeed an overriding aim, but it should not be the overriding aim of environmental philosophy per se (although it may, of course, be the overriding aim of particular environmental philosophers). The question of whether or not, and in what sense, nature has intrinsic value does not stand in contrast to questions of finding workable solutions to environmental problems. To the contrary, such questions can often go hand in hand. Debates about intrinsic value in nature take place within environmental ethics, while finding workable solutions to environmental problems is a question for the entire environmental movement (indeed, for everyone). The whole field of environmental ethics (as well as the wider field of environmental philosophy) can be seen as a part of this larger environmental movement, within which it has its specific role. While the aim of this larger movement is indeed to find workable solutions to environmental problems, the role of environmental ethics is (among other things) to provide theoretical foundations for these solutions. Environmental ethics interacts with other parts of the environmental movement in various ways, and a lively internal debate within environmental ethics should be seen as a sign of health for the environmental movement at large, indicating both self-criticism and the absence of dogmatism. 27

2. Err aff on theory because of time skew and neg side bias. Negs won 12% more rounds at VBT according to Tabroom, and Fantasy Debate confirms 7% neg side bias.

3. Aff should defend a principle, not a particular EP policy. This is the most accurate interp of the topic.

**Nebel 14** writes[[18]](#footnote-18)

I hear that many affirmatives on this topic defend the implementation of a particular policy or set of policies in developing countries. The classic framing of this issue has been in terms of an Aims vs. Implementation dichotomy, which has carried over from the Jan/Feb 2013 topic about valuing rehabilitation above retribution. In this article, I’ll explain why I think that is a false dichotomy, and how you can strategically get past this framing of the issue. The most important word in the resolution, for the purposes of this disagreement, is ‘prioritize.’ This is because a topical affirmative advocacy has to do the thing that the resolution says ought to be done. In this case, that’s prioritization. Now, if you just stop there, you might have the following thought: if a topical advocacy just needs to prioritize environmental protection (EP) over resource extraction (RE), then implementing some particular policy that prioritizes EP over RE is, ceteris paribus, topical. But that’s not a good inference. The reason is that what has to do the prioritizing in order to be topical is the agent. Your advocacy must be that the agent prioritize EP over RE, whatever that means. In this case, that agent is ‘developing countries.’ **Just because an agent implements some policy** or set of policies that prioritize EP over RE **does not mean that the agent** itself **prioritizes EP over RE**. This may seem like a picky distinction, but consider some examples. **Suppose I chose to spend time with my friends tonight, rather than work on a paper**. This choice might prioritize friendship over work. But this choice does not make it the case that I prioritize friendship over work. **I might actually** be the kind of person who **prioritize**s **work over friendship, so that I almost always choose to write a paper** when I could instead hang out with friends**, but this** night **is the rare opportunity when I hang out with my friends**. So, just because some choice or action prioritizes one thing over another does not entail that the agent prioritizes one thing over another. If we assume that an advocacy is topical only if it makes it the case that the agent does what the resolution says it ought to do, then this means that implementing a particular policy that prioritizes EP over RE is not enough to be topical. (That is, absent evidence about this policy having the effect of changing developing countries’ priorities as a whole. But then this advocacy might only be effects-topical.) People might respond with a definition of EP or RE in terms of policies. This definition might show that the objects to be prioritized are sets of policies, or some common feature of policies, rather than an abstract aim. But the relevant question is not Aims vs. Implementation: that framing of the topic only persists because of Jan/Feb 2013, on which people defined 'rehabilitation' and 'retribution' as either an aim or a kind of policy. But Aims vs. Implementation is not the correct contrast. The correct contrasts are Aims vs. Policies, and Prioritization vs. Implementation. The point is that prioritizing some kind of policy is not the same as implementing some policy from that set. Aims vs. Policies is a matter of the direct object, whereas Prioritization vs. Implementation is a matter of the verb. **We can agree that EP and RE are sets** or kinds **of policies, but** think **that the resolution is about which we ought to prioritize, not** which we ought to **implement**. However, this does not mean that the anti-policy side completely wins. People who wish to defend an anti-policy interpretation often make their interpretations too strong, by **suggesting** that **no questions of implementation are relevant**. That **seems** to me **false**. To see why, consider a variation on my earlier example about hanging out with my friends or writing a paper. Suppose I used to prioritize work over friendship, but I now prioritize friendship over work. It seems that I am now more likely to spend time with my friends, when this trades off with writing a paper, than I used to be. This is because **an agent’s priorities shape her decisions**. They don’t guarantee that an agent will always choose any particular action that better reflects those priorities. But they will lead to different patterns of actions on the whole. If this is right, then **the most accurate Aims-based interp**retation of the topic **allows that the aff**irmative **advocacy leads to** the **implementation of policies that prioritize EP over RE as an effect**, although the affirmative can’t advocate any particular policy. Implementation of particular policies is an effect, which can be used to garner advantages or disadvantages, but cannot be the affirmative advocacy. And any particular effect of that kind can only be known with some uncertain probability; it cannot be assumed to occur as a matter of fiat.

4. Gutcheck against dumb theory. Competing interps leads to a race to the bottom where every round comes down to theory, killing substantive education. Intervention is inevitable in blippy theory debates.

5. Wiki solves predictability. It’s the TOC. I’ve been reading PP for five months, so you should have cards by now.

# 1AR

## AT T- Specific Policy

### I Meet

I meet. Implementation of the PP directly mandates court-enforceable risk assessment.

**Wibisana 11**

Andri G Wibisana (Lecturer of the Law Faculty of Universitas Indonesia). “The Development of the Precautionary Principle in International and in Indonesian Environmental Law.” Asia Pacific Journal of Environmental Law, Vol. 14(1 & 2), 2011. http://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2131666

Early **experience of implementing the p**recautionary **p**rinciple in Indonesia **illustrates that the principle is manifested in the obligation to conduct risk assessment. This** type of **implentation** of the precautionary principle **can be clearly seen in the decisions of** District and High Administrative **Courts** on the Kapas Transgenik case and in Government Regulation No 21 of 2005.

### Counter-Interp

Counter-Interp – The aff should defend the precautionary principle, i.e. my plan.

1. The PP lit is not about specific policies. Debating the PP is key to topic education, that’s Schettler and Raffensperger 4.

Topic education outweighs – that’s Samuelsson 10. Ecological ethics is key to effective environmental policy.

2. Predictable limits. Specific policies blow the lid off the topic. There are infinite solvency mechanisms for EP and this topic is already very broad. General principle means negs get stock ground regardless of the aff.

Predictable limits control the link to fairness and education because it’s key to pre-round prep.

3. I’m most textual – that’s Nebel 14. Prefer topic analysis to single words because the whole sentence determines a word’s context. Textuality controls the link to predictability and ground.

### AT Advocacy Shift

1. CX solves ambiguities.

2. Ex post facto theory solves. If the 1AR shifts, you could read theory in the 2NR. Don’t punish me for what I didn’t do.

3. TURN – the PP is the most stable plan because it’s enshrined in multiple international laws.

4. TURN – I could shift out of generic disads with the nuances of my plan which is worse for the neg – proved by the aff bias in policy debate.

5. Infinitely regressive. I could always clarify further. An advocacy statement with a solvency advocate is the only logical brightline.

6. TURN – The PP is stable. It’s defined according to the Wingspread Statement which is based in the lit.

### AT Real World/Education

1. TURN— I outweigh on portability. Principles apply to everyone, but none of us are developing country policy makers.

2. TURN— theory ensures zero topic education. Allowing me to read a sub-optimal plan is still better.

3. TURN—wrong forum. Policy and public forum give you policy education. LD is the only forum for philosophy.

4. I control uniqueness. The other 3 topics this year were policy-focused.

5. Philosophy turns real world education.

**Shammas 12** writes[[19]](#footnote-19)

The past year gives one the suspicion that American society is dysfunctional. Our **Congress is useless**, our institutions inept. **Faced with the terror of existence, young men** like Adam Lanza **react with violence. Faced with** manageable problems such as **a "fiscal cliff," our democracy self-destructs.** Anger is everywhere; understanding is nowhere. Although a **democratic society cannot function unless** its **citizens** are able to **rationally debate** one another, rationality is missing from American politics. We assail our political enemies with intractable opinions and self-righteous anger. An ugly bitterness pervades everything. Meanwhile, our country is slowly but surely committing suicide. It seems to me that this dysfunctional political dialogue, which stems from the iron certainty we grant our opinions, is the most pressing problem confronting 21st century America. In fact, it is a crisis. For without the ability to carry on a useful dialogue, we cannot solve our greatest challenges, or even our smallest ones. This raises the question: How can we solve this crisis? Because the capacity to debate requires the capacity to think, I believe the answer lies in philosophy. Why philosophy? Because the study of **philosophy**, the "love of wisdom," creates and **nurtures thoughtful minds**, minds **that can** -- as Aristotle suggests -- **entertain a thought without accepting it.** With a philosophic worldview, a Republican who despises any tax increase or economic stimulus could at least consider the notion of tax hikes or Keynesian economics. A Democrat facing antithetical ideas could do likewise. Thought rather than anger could become the default response to opposing worldviews. Indeed, philosophy can do a great deal to lessen the anger that is growing like a cancerous tumor in modern America. The tools exist in both Eastern and Western thought -- in the Stoic exhortation to accept the present as it is, in Buddhist meditation, in the Humanist's transcendent appeal to reason, in Kant's categorical imperative. Philosophy can help us inculcate virtue for, in the words of Socrates, "knowledge is virtue." While some philosophies obviously conduce toward peace more than others, while some philosophers (Marcus Aurelius) seem kinder than others (Nietzsche), the open-minded study of different philosophies at least opens one up to the possibility that one is wrong. **One realizes**, like Socrates did, **that knowledge is anything but certain**, that true wisdom lies in realizing how much one does not know, in understanding that our knowledge of the universe (and therefore of earthly things like politics) is utterly inadequate, perhaps comparable to the area of a pin's tip against a table. **This** realization **makes one less angry** when confronted **with opposing views**, replacing counterproductive anger with productive curiosity. Despite the benefits of the philosophic mindset, we do not cultivate this mindset in our children. In fact, **philosophy is** almost entirely **absent from** American **schools.** For example, there is no AP (Advanced Placement) Philosophy course. While some high schoolers may have heard of Socrates, Plato, or Aristotle, most do not truly understand their philosophies -- much less the philosophies of men like Descartes, Schopenhauer, or Nietzsche. This is shameful, because a person who does not understand the history of thought does not understand the rationality behind our political system. The first time I read a philosopher was not until my first semester of college. My professor assigned Plato's Republic, and while at first I (admittedly) did not understand anything, eventually I became absolutely enamored with this incredible man. Here was a person who had thought about so many of the same things I had, albeit thousands of years ago and with much more sophistication than I could ever muster. What is justice? What is truth? Why do people suffer? Is there an afterlife? These are the questions that children ask their parents, the questions that scare us most, and perhaps because of this fear we do not consider them when we grow up. I think this is a great mistake. We should consider these questions. For by reading philosophy, I became less frightened of them. I no longer shirked away from contemplating death (thanks Epicurus) or morality (thanks Kant) or misfortune (thanks Epictetus). More, I realized that anger -- in both politics and everyday life -- is largely a reaction to fear, and that this fear can be lessened exponentially through the sort of reflection philosophy fosters. I don't know why philosophy isn't taught in high school. Perhaps the subject seems too esoteric or pretentious. Perhaps there is a fear that philosophy could encroach on the sort of questions religion purports to answer -- "how should one live," "how should one die," and so on. Some parents may feel uncomfortable with the idea of their children receiving answers to "the big questions" from Socrates and Plato as well as from Jesus and Paul. This fear is unfounded. In general, philosophy does not squander religion; it merely exhorts one to understand the world by opening one's mind. It encourages one to consider multiple possibilities (unlike our politicians), only accepting the possibility that appeals to one's innate sense of reason. In a diseased society that is filled with so much anger and bitterness -- indeed, with so much madness -- we could do worse than expose our children to philosophy. In fact, such exposure would teach our children to react to problems with an inquisitive rather than angry mind -- a concept that the children in Congress have not yet grasped. To those who say philosophy is impractical (and thus that learning how to think is impractical) I say: nonsense. Our society is dysfunctional because we have forgotten how to think, if we ever truly knew how to think at all. Although we as a society believe we are in possession of all truth, we are not. To study philosophy is to learn how woefully ignorant we are, and this knowledge can perhaps teach us humility, can perhaps suggest to us that the other side may have some value after all. So my point is this: **Our** diseased **political system is in dire need** of a hefty dose **of philosophy, and the best way** to inject this dose into American society **is** to start at the stem -- **to raise** our **children to have a philosophic mindset** by teaching philosophy in schools. In the process we will, slowly but surely, be raising Americans who possess the capacity to respond to problems with inquisitive rather than angry minds, perhaps ending this suicidal gridlock.

### AT Field Context

1. These cards are about implementation, and the PP is implementable. I fiat a principle.

2. Field context provides biased and insufficient limits for debate.

Eric **Kupferbreg 87**, University of Kentucky, Senior Assistant Dean, Academic & Faculty Affairs at Northeastern University, College of Professional Studies Associate Director, Trust Initiative at Harvard School of Public Health 1987 “Limits - The Essence of Topicality” ttp://groups.wfu.edu/debate/MiscSites/DRGArticles/Kupferberg1987LatAmer.htm

Often, **field contextual definitions are too broad** or too narrow **for debate purposes**. **Definitions** derived from the agricultural sector necessarily **incorporated financial and bureaucratic factors which are less relevant in considering a 'should' proposition.** Often subject **experts' definitions reflected** administrative or **political motives to expand or limit** the relevant **jurisdiction** of certain actors. Moreover, **field context is an insufficient criteria for choosing between competing definitions. A particularly broad field might have several subsets** that invite restrictive and even exclusive definitions. (e.g., What is considered 'long-term' for the swine farmer might be significantly different than for the grain farmer.) Why would debaters accept definitions that are inappropriate for debate? If we admit that debate is a unique context, then additional considerations enter into our definitional analysis.

## AT Will to Power NC

### Straight Turns

I’ll concede the framework.

1. TURN – Nietzsche’s conception of morality entails prioritizing EP.

**Drenthen 99** writes[[20]](#footnote-20)

However, I have shown that this does not necessarily mean that Nietzsche is irrelevant for environmental ethics. I have argued that Nietzsche’s philosophy is relevant for us today, because he points to a key characteristic of our current understanding of the world: the tension between the need for a normative concept of nature on the one hand, and our being conscious of the problematic nature of any attempt to develop such a concept for moral orientation on the other. Nietzsche’s philosophy elaborates on the problems connected with such an ambivalent understanding of the world. By doing so, he might make us more susceptible to the underlying fundamental ethical problems that we face today. **As a key concept in Nietzsche’s critique of morality, ‘nature’ functions as a counterpoint for any moral interp**retation **of nature. Nietzsche not only criticizes the** dominant **anthro**pocentric **attitude towards nature, but all appropriations of nature. At the same time he urges us to** make **better interpret**ations of what **nature** really is. According to Nietzsche, we cannot get rid of nature. **Although we are inevitably trying to master nature, we remain aware** of the fact **that the world is not of our making. We find ourselves already ‘in context’**, we live in a world that is already there. This otherness of nature seems to provoke a sense of awe. Many poets and philosophers have tried to articulate this sense, and have tried to show that nature is of value, simply because it exists. For Nietzsche also, nature is not just the surplus of each interpretation. **Nature is also characterized with** positive attributes such as **creativity, greatness, forcefulness, independence, and necessity.** Nietzsche exhorts us, though, to be cautious in using such positive attributions, as they can be nothing more than attempts to articulate the moral meaning nature has for us. Nietzsche points out that the conflict between traditional environmental ethics and postmodern environmental philosophy is not just an academic misunderstanding, but can itself be regarded as a symptom of a crisis in our current relationship with nature. He urges us to go beyond the debate between relativistic constructivism and moralistic value realism, and try and find new modes of thinking of nature that more adequately reflect the ambivalent status of nature in our time. His philosophy makes us susceptible for the risk of repeating the hubris against nature in our attempts to identify the moral meaning of nature in itself. At the same time, it challenges us to sincerely, self-critically and sensitively assess our moral experiences of nature.

2. TURN – The will to power requires that we stay true to the Earth, prioritizing EP.

**Freeman 11** writes[[21]](#footnote-21)

With the temperature rising and icecaps melting and storms raging in seemingly unprecedented force, the **signs of** a potentially catastrophic global **climate change seem** everyday more obvious and **impossible to discount**. It is in the context of such times that it is perhaps all the more relevant that we come here to discuss the import of Nietzsche's thought for ecocritism. How convincing are recent "green" readings of Nietzsche? **Nietzsche's project of** a **"revaluation of all values" involved** an overturning or **overcoming of the other-worldly values that have shaped the Western tradition** since Plato**, most dramatically expressed in the exhortation of** Nietzsche's **Zarathustra to '"stay true to the earth**and do not believe those who talk of overearthly hopes'**"** (*Z* 'Prologue', 3). One of the reasons Nietzsche brings back Zarathustra as his literary mouthpiece is that the historical Persian prophet was the one who first spoke of a judgment day and an eternal other-worldly reward. Thus Nietzsche brings Zarathustra back to atone for his mistakes and issue what might perhaps be taken as a call for an awakening of an ecological consciousness. Graham Parkes certainly understands it this way arguing that **Nietzsche's '**philosophy of nature, his **understanding of the natural world and human existence as interdependent** processes **and dynamic configurations of will to power, can contribute to grounding a realistic**, global **ecology that in its loyalty to the earth may be capable of saving it**.'1 Nevertheless, despite the "green" readings by contemporary Nietzsche scholars, Greg Garrard, in his indispensable introduction to the field of ecocriticism, concludes that though Nietzsche seeks a biocentric perspective like deep ecologists, he finds, unlike them, 'only nihilism in the process.'2 I wish here to merely suggest how Nietzsche's thought perhaps does not end in nihilism

3. TURN – The will to power is non-anthropocentric and interpretative, necessarily taking into account the value of nature. **Storey 13** summarizes Parkes[[22]](#footnote-22)

[Ellipses in original.] **The pivotal concept in Nietzsche's** later, positive **view of nature is the will to power.** As we saw in the previous chapter, there are three key aspects to it: its cosmic scope, its connection to interpretation, and its development along a continuum. In a sense, everything turns on whether will to power is interpreted anthropocentrically. As we saw, this is Heidegger's position: not that the will to power is merely a psychological principle, but that for Nietzsche, psychology becomes metaphysics through the projection of will onto all beings. But Parkes makes a strong case that **Nietzsche's ultimate meaning for the concept is cosmic** in scope. Discussing Nietzsche's “thought experiment of extrapolating from what he know immediately and intimately...to the rest of life and to 'the so-called mechanistic (or material) world,” Parkes insists that **this is by no means an instance of anthro**pocentrism**, since Nietzsche has** just **desubstantialized the soul into** a configuration of **forces...shown the human “I” to be a fiction** generated by the grammatical habit of positing a doer for every doing, and demonstrated 'will' to be a complex function of forces issuing from a social structure of multiple 'souls' deep within the body. Far from being the 'will power' exerted by the human ego, the will of will to power is...a cosmic force. In other words, the problem of “access” to the nonhuman realm is canceled when the notion of a substantial self or soul is seen through; that is what permits Nietzsche's “extrapolation.” **Will to power is** an **inherently interpretative** force. This is usually taken in a strictly human sense, that given we are the only beings with language and consciousness, we are the only beings that interpret, that tells stories and create culture and give accounts of the way things are. However, Parkes suggests that If Nietzsche's suggestion that 'all existence is essentially an interpreting existence' strikes us as strange, this is because we are so accustomed to the Cartesian dichotomy between the animate and inanimate (with only the human animate, res cogitans, being capable of interpreting). Less anthropocentric philosophies like Daoism and Mahayana Buddhism assume a continuum between natural and human, with each particular on the continuum construing the world from its own perspective. Parkes acutely explains how the **failure to see this interpretive aspect undermines previous efforts in seeing Nietzsche as an environmental thinker**: Neither Hallman nor Acampora seems to appreciate this interpretive dimension of the will to power, Hallman being too focused on 'the interrelated dimension of all things' and Acampora overemphasizing 'exploitation.' The latter rightly emphasizes the importance in Nietzsche of the order of rank and pathos of distance—but these are ideas that he applies to hierarchy among human beings and not to their putative superiority over natural beings. Nietzsche's perspective is best illustrated (if not most articulated) in Zarathustra. As Parkes explains, **Zarathustra's ideal is to “let each particular thing generate its** own **horizons, arising and perishing** just **as it does. In terms of environmental ethics, to experience in this way allows one to appreciate** the **intrinsic value of the natural world** absolutely.” **But what is the nature of this interpretive world-projection?** Interpretation and projection seem to imply a unidirectional imposition of the subject on the objective world. Parkes clarifies this by explaining just what it is the drives interpret: “There is some resistance there, something to 'push back' and set limits on how the world can be construed.... What pushes back...as our drives interpretively project a world, is will in the form of other drives—not only the drives of our fellow human beings, but also those that animate animals, plants, and other natural phenomena.” **Perspectives**, in other words, **are always perspectives *on* other perspectives**. A perspective is not a windowless monad, but a finite clearing or opening within which the world manifests in a certain way, with some capacity for receptivity and response. At the human level, **the** higher or **better interpretation will** be the one that **respect**s and incorporates as many “resistances” and “limits”--**as many perspectives**--**as possible**. All told, Parkes classifies Nietzsche as an “ecocentrist,” the view that the main object of ethical concern should be biotic communities (wholes) rather than individual organisms (parts).

4. TURN – Environmental protection overcomes the resistance of resource extraction companies to regulation. **Outweighs neg offense**. Maintaining the squo is a form of inaction which doesn’t proactively overcome resistance.

5. He’s conceded the WTO advantage which turns case. Developing countries should use their will to power to overcome WTO influence.

1. Cummiskey, David. Associate professor of philosophy at the University of Chicago. “Kantian Consequentiaism.” Ethics 100 (April 1990), University of Chicago. <http://www.jstor.org/stable/2381810> [↑](#footnote-ref-1)
2. Stephen Luntz (staff writer). Citing Safa Motesharrei, graduate student in mathematics at the National Socio-Environmental Synthesis Center. “According to a NASA Funding Study, We’re Pretty Much Screwed.” I Fucking Love Science. March 19th, 2014. http://www.iflscience.com/environment/according-nasa-funded-study-were-pretty-much-screwed#cWych02cH9mk6Tm6.16 [↑](#footnote-ref-2)
3. William CALVIN, theoretical neurophysiologist at the University of Washington, Atlantic Monthly, January, The Great Climate Flip-Flop, Vol 281, No. 1, 1998, p. 47-64 [↑](#footnote-ref-3)
4. Dr. Glen Barry 13, Political ecologist with expert proficiencies in old forest protection, climate change, and environmental sustainability policy, Ph.D. in "Land Resources" and Masters of Science in "Conservation Biology and Sustainable Development” from the University of Wisconsin-Madison, “ECOLOGY SCIENCE: Terrestrial Ecosystem Loss and Biosphere Collapse,” Forests.org, February 4, 2013, pg. http://forests.org/blog/2013/02/ecology-science-terrestrial-ec.asp [↑](#footnote-ref-4)
5. Brian Tomasik (“I work on researching the best ways to reduce suffering in the future, examining crucial considerations in science, politics, sociology, and philosophy that bear on this topic. You can read more on my website: Essays On Reducing Suffering. I graduated from Swarthmore College in 2009, where I studied computer science, mathematics, statistics, and economics. I wrote a thesis on multitask feature selection and published additional papers on machine learning and international trade. From 2009-2013, I worked in the relevance division of Bing at Microsoft, improving ranking algorithms for web results through feature engineering, data mining, and architectural innovation. I built end-to-end three of Bing's production ranking models, which served over 5 billion searches on Bing and Yahoo every month.”). “Crop Cultivation and Wild Animals.” Essays on Reducing Suffering. 2008-2013, Last update: December 12th, 2013. http://www.utilitarian-essays.com/crop-cultivation-and-wild-animals.html [↑](#footnote-ref-5)
6. Brian Tomasik (graduated from Swarthmore, former programmer at Bing). “International Cooperation vs. AI Arms Race.” Last updated April 3rd, 2014. http://utilitarian-essays.com/ai-arms-race.html#section7 [↑](#footnote-ref-6)
7. Carl Shulman (Singularity Institute of Artificial Intelligence) and Stuart Armstrong (InhibOx, an organization dedicated to developing and delivering the best services and technologies in computer-aided drug discovery ). “Singularity Hypotheses: A Scientific and Philosophical Assessment.” April 13th, 2011. http://singularityhypothesis.blogspot.com/2011/04/arms-races-and-intelligence-explosions.html [↑](#footnote-ref-7)
8. David Dana (Northwestern University School of Law). “The Contextual Rationality of the Precautionary Principle.” Faculty Working Paper. 2009. [↑](#footnote-ref-8)
9. Don Flournoy 12, Citing Feng Hsu, PhD NASA Scientist @ the Goddard Space Flight Center and Don is a PhD and MA from UT, former Dean of the University College @ Ohio University, former Associate Dean at SUNY and Case Institute of Technology, Former Manager for University/Industry Experiments for the NASA ACTS Satellite, currently Professor of Telecommunications @ Scripps College of Communications, Ohio University, “Solar Power Satellites,” January 2012, Springer Briefs in Space Development, p. 10-11 [↑](#footnote-ref-9)
10. Global Exchange (international human rights organization dedicated to promoting social, economic and environmental justice around the world). “Top Reasons to Oppose the WTO.” 2011. http://www.globalexchange.org/resources/wto/oppose [↑](#footnote-ref-10)
11. Russell Mokhiber (editor of *Corporate Crime Reporter*) and Robert Weissman (editor of *Multinational Monitor*). “Top 10 Reasons to Shutter the WTO.” Mother Jones. November 24th, 1999. http://www.motherjones.com/politics/1999/11/top-10-reasons-shutter-wto [↑](#footnote-ref-11)
12. Global Exchange (international human rights organization dedicated to promoting social, economic and environmental justice around the world). “Top Reasons to Oppose the WTO.” 2011. http://www.globalexchange.org/resources/wto/oppose [↑](#footnote-ref-12)
13. William W. Burke-White (Lecturer in Public and International Affairs and Senior Special Assistant to the Dean at the Woodrow Wilson School of Public and International Affairs, Princeton University and Ph.D. at Cambridge). “Human Rights and National Security: The Strategic Correlation.” The Harvard Human Rights Journal, Spring, 17 Harv. Hum. Rts. J. 249, Lexis. 2004. [↑](#footnote-ref-13)
14. Noah Sachs (Associate Professor, University of Richmond School of Law and Director, Robert R. Merhige, Jr. Center for Environmental Studies). “Rescuing the Strong Precautionary Principle from its Critics.” U of Illinois Law Review. August 1st, 2011. [↑](#footnote-ref-14)
15. David Dana (Northwestern University School of Law). “The Contextual Rationality of the Precautionary Principle.” Faculty Working Paper. 2009. [↑](#footnote-ref-15)
16. Simon Grant and John Quiggin (University of Queensland, School of Economics). “Bounded awareness, heuristics, and the Precautionary Principle.” Journal of Economic Behavior and Organization. July 17th, 2013. [↑](#footnote-ref-16)
17. Ted Schettler (SEHN's Science Director, received his MD from Case-Western Reserve University and a masters degree in public health from the Harvard School of Public Health. He practiced medicine for many years in New England.Ted has worked extensively with community groups and non-governmental organizations throughout the US and internationally, addressing many aspects of human health and the environment. He has served on advisory committees of the US EPA and National Academy of Sciences.) and Carolyn Raffensperger (executive director of the Science and Environmental Health Network. In 1982 she left a career as an archaeologist in the desert Southwest to join the environmental movement. She first worked for the Sierra Club where she addressed an array of environmental issues, including forest management, river protection, pesticide pollutants, and disposal of radioactive waste. She began working for SEHN in December 1994. As an environmental lawyer she specializes in the fundamental changes in law and policy necessary for the protection and restoration of public health and the environment). “Why is a precautionary approach needed?” The precautionary principle: protecting public health, the environment and the future of our children. WHO. 2004. http://www.euro.who.int/\_\_data/assets/pdf\_file/0003/91173/E83079.pdf [↑](#footnote-ref-17)
18. Jake Nebel (TOC semifinalist in 2009, philosophy student at Oxford, winner of the Marshall Scholarship from Princeton University). “Topicality, Implementation, and What We Ought To Prioritize.” January 28th, 2014. http://victorybriefs.com/vbd/2014/1/topicality-implementation-and-what-we-ought-to-prioritize [↑](#footnote-ref-18)
19. Shammas, Michael (“Michael Shammas studied international relations and political theory at Duke University. He will be attending law school next year”). “For a Better Society, Teach Philosophy in High Schools.” HuffPo. 26 December 2012. <http://www.huffingtonpost.com/mike-shammas/for-a-better-society-teac_b_2356718.html?utm_hp_ref=tw> [↑](#footnote-ref-19)
20. Martin Drenthen (Associate Professor of Philosophy at the Institute for Science, Innovation and Society, at the Faculty of Science of Radboud University). “The Paradox of Environmental Ethics: Nietzsche’s View of Nature and the Wild.” Environmental Ethics. Vol 21, No. 2. 1999. http://home.xmsnet.nl/drenthen/publicaties/paradoxenvethics.PDF [↑](#footnote-ref-20)
21. Tim Freeman (Professor of Philosophy at University of Hawaii at Hilo). “Nietzsche as Ecological Thinker.” Presented at 2011 Association for the Study of Literature and the Environment. https://www.academia.edu/705207/\_Nietzsche\_as\_Ecological\_Thinker\_ [↑](#footnote-ref-21)
22. David Storey (member of the Philosophy faculty at Boston College). “Nietzsche and Ecology Revisited: The Biological Basis of Value.” Environmental Ethics. 2013. https://www.academia.edu/1816642/\_Nietzsche\_and\_Ecology\_Revisited\_The\_Biological\_Basis\_of\_Value\_forthcoming\_in\_Environmental\_Ethics\_pending\_revisions\_ [↑](#footnote-ref-22)